6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 1090

[EPA-HQ-OAR-2022-0513; FRL-9845-01-OAR]

RIN 2060-AV73

Request From States for Removal of Gasoline Volatility Waiver

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: Pursuant to provisions specified by the Clean Air Act (CAA), governors of eight states submitted petitions requesting that EPA remove the 1-pound per square inch (psi) Reid vapor pressure (RVP) waiver for summer gasoline-ethanol blended fuels containing 10 percent ethanol (E10). This action acts on those requests from the Governors of Illinois, Iowa, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin by proposing to remove the 1-psi waiver. EPA also received multiple petitions from stakeholders requesting an extension of the effective date to the summer of 2024. This action proposes to delay the effective date for one year consistent with statutory provisions. Thus, we propose an effective date for all states of April 28, 2024. This action also proposes a regulatory process by which a state may request to reinstate the 1-psi waiver.

DATES: *Comments*. Comments must be received on or before **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Public hearing: EPA will hold a virtual public hearing on **[INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Please refer to the **SUPPLEMENTARY INFORMATION** section for additional information on the public hearing.

ADDRESSES: *Comments*. You may send comments, identified by Docket ID No. EPA-HQ-OAR-2022-0513, by any of the following methods:

- Federal eRulemaking Portal: *https://www.regulations.gov* (our preferred method) Follow the online instructions for submitting comments.
- E-mail: *a-and-r-Docket@epa.gov*. Include Docket ID No. EPA-HQ-OAR-2022-0513 in the subject line of the message.
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Air Docket, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.
- Hand Delivery or Courier: EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. The Docket Center's hours of operations are 8:30 a.m. – 4:30 p.m., Monday – Friday (except Federal Holidays).

Instructions: All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to *https://www.regulations.gov*, including any personal information provided. For the full EPA public comment policy, information about confidential business information (CBI) or multimedia submissions, and general guidance on making effective comments, please visit *https://www.epa.gov/dockets/commenting-epa-dockets*.

Public hearing. The virtual public hearing will be held on **[INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The hearing will begin at 9:00 a.m. Eastern Daylight Time (EDT) and end when all parties who wish to speak have had an opportunity to do so. All hearing attendees (including even those who do not intend to provide testimony) should register for the public hearing by **[INSERT DATE 10 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Information on how to register can be found at *https://www.epa.gov/gasoline-standards*. Additional information regarding the hearing appears below under **SUPPLEMENTARY INFORMATION**.

FOR FURTHER INFORMATION CONTACT: For questions regarding this action, contact Lauren Michaels, Office of Transportation and Air Quality, Compliance Division, Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor, MI 48105; telephone

number: (734) 214-4640; email address: *michaels.lauren@epa.gov*. For questions regarding the public hearing, contact Nick Parsons at *RFS-Hearing@epa.gov*.

SUPPLEMENTARY INFORMATION:

Does this action apply to me?

Entities potentially affected by this proposed rule are those involved with the production, distribution, and sale of transportation fuels, including gasoline and diesel fuel. Potentially affected categories include:

Category	NAICS[1] Code	Examples of Potentially Affected Entities
Industry	211130	Natural gas liquids extraction and fractionation
Industry	221210	Natural gas production and distribution
Industry	324110	Petroleum refineries (including importers)
Industry	325110	Butane and pentane manufacturers
Industry	325193	Ethyl alcohol manufacturing
Industry	325199	Manufacturers of gasoline additives
Industry	424710	Petroleum bulk stations and terminals
Industry	424720	Petroleum and petroleum products wholesalers
Industry	447110, 447190	Fuel retailers
Industry	454310	Other fuel dealers
Industry	486910	Natural gas liquids pipelines, refined petroleum products pipelines
Industry	493190	Other warehousing and storage – bulk petroleum storage

[1] North American Industry Classification System (NAICS).

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. This table lists the types of entities that EPA is now aware could potentially be affected by this action. Other types of entities not listed in the table could also be affected. To determine whether your entity would be affected by this action, you should carefully examine the applicability criteria in 40 CFR part 1090. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

Participation in virtual public hearing.

Information on how to register for the hearing can be found at *https://www.epa.gov/gasoline-standards*. The last day to pre-register to speak at the hearing will

be **[INSERT DATE 10 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Each commenter will have 3 minutes to provide oral testimony. EPA may ask clarifying questions during the oral presentations, but will not respond to the presentations at that time. Written statements and supporting information submitted during the comment period will be considered with the same weight as oral comments and supporting information presented at the public hearing.

Please note that any updates made to any aspect of the hearing will be posted online at *https://www.epa.gov/gasoline-standards*. While EPA expects the hearing to go forward as set forth above, please monitor the website or contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to determine if there are any updates. EPA does not intend to publish a document in the *Federal Register* announcing updates.

If you require the services of a translator or special accommodations such as audio description, please pre-register for the hearing and describe your needs by **[INSERT DATE 10 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. EPA may not be able to arrange accommodations without advance notice.

Outline of this Preamble

I. Executive Summary

In this action, EPA is responding to requests from eight state governors to remove the 1-psi volatility waiver for gasoline-ethanol blends containing 10 percent ethanol beginning with the summer of 2023. The governors made their requests pursuant to CAA section 211(h)(5), which provides that the Administrator shall remove the 1-psi waiver via regulation upon a demonstration by a governor that the 1-psi waiver increases emissions in their state.

After review of the modeling results presented by the governors in their requests, EPA is proposing to remove the 1-psi waiver in the following states: Illinois, Iowa, Nebraska, Minnesota, Missouri, Ohio, South Dakota, and Wisconsin.

We recognize that the initial requests made by the governors of many of the states were submitted in the spring of 2022, such that a summer of 2023 effective date may have been possible, and seek comment on such an effective date. However, we have also received numerous petitions to delay the effective date of this action to at least 2024.[1] After consideration of the petitions, and given current timing considerations, we propose a finding of insufficient supply of gasoline in 2023, and therefore also propose an effective date of April 28, 2024 for removal of the 1-psi waiver in all eight states, as described further in Sections IV and X.

[1] We refer to these petitions as "extension petitions" throughout this proposal.

II. Background and History

EPA first took regulatory action to control the volatility of gasoline in 1987.[2] Because higher gasoline volatility leads to higher evaporative emissions, EPA regulates the RVP—a measure of fuel volatility—of gasoline during summer months in order to reduce volatile organic compound (VOC) emissions that contribute to the formation of smog (ground-level ozone).[3] The volatility of fuel depends on refineries' decisions in formulating their gasoline. Subsequent to EPA's actions, Congress enacted the CAA Amendments of 1990, which included statutory volatility provisions for summer gasoline. These provisions largely codified EPA's regulatory approach, including establishing a 9.0 psi RVP standard for gasoline volatility in the summer.[4] Because blending ethanol into gasoline increases the volatility of the resulting fuel due to chemical differences between ethanol and gasoline, Congress also codified a 1-psi volatility waiver for blends of gasoline and 10 percent ethanol (i.e., E10), allowing such blends to have a 1.0-psi higher RVP than otherwise allowed for gasoline, consistent with EPA's prior regulatory approach.[5] This allowance only applies to gasoline-ethanol blends containing between 9 and 10 percent ethanol (E10), and does not extend to gasoline-ethanol blends containing greater than 10 and less than or equal to 15-percent ethanol (E15).[6] The 1-psi waiver also does not apply to reformulated gasoline (RFG).

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[2] See 52 FR 31274 (August 19, 1987); 54 FR 11868 (March 22, 1989); 55 FR 23658 (June 11, 1990).

[3] Gasoline must have volatility in the proper range to prevent driveability, performance, and emissions problems. If the volatility is too low, the gasoline will not ignite properly; if the volatility is too high, the vehicle may experience vapor lock. Importantly for this action, excessively high volatility also leads to increased evaporative emissions from the vehicle. Vehicle evaporative emission control systems are designed and certified on gasoline with a volatility of 9.0 psi RVP. Higher volatility gasoline may overwhelm the vehicle's evaporative control system, leading to a condition described as "breakthrough" of the cannister and mostly uncontrolled evaporative emissions.

[4] CAA section 211(h)(1); 42 U.S.C. 7545(h)(1). CAA section 211(h)(1) requires EPA to establish volatility requirements—that is, a restriction on RVP—during the high ozone season. To implement these requirements, EPA defines "high ozone season" or "summer season" at 40 CFR 1090.80 as "the period from June 1 through September 15 for retailers and wholesale purchaser consumers, and May 1 through September 15 for all other persons, or an RVP control period specified in a state implementation plan if it is longer." In general practice by industry and for purposes of this preamble, the high ozone season is referred to as the "summer" or "summer season" and gasoline produced to be used during the high ozone season is called "summer gasoline." EPA's regulations do not impose any volatility requirements on any type of blend of gasoline outside of the summer season.

[5] CAA section 211(h)(4); 42 U.S.C. 7545(h)(4).

[6] See 40 CFR 1090.215(a), codifying the statutory 1-psi waiver.

This volatility waiver, at the time the provision was enacted, applied to a relatively small portion of the gasoline sold in the United States. Today, however, almost all gasoline sold is E10, and thus the 1-psi waiver increases the volatility of most gasoline.

On April 28, 2022, eight governors submitted a petition for the removal of the 1-psi waiver for E10 in their states beginning in the summer of 2023, pursuant to CAA section 211(h)(5). On June 10, 2022, the Governor of Ohio also submitted a petition requesting the removal of the 1-psi waiver in that state.[7] On July 21, 2022, the Governor of Kansas notified EPA that they were rescinding their request for removal of the 1-psi waiver in Kansas.[8] On October 13, 2022, the Governor of North Dakota notified EPA that they were rescinding their request for removal of the 1-psi waiver in North Dakota.[9] On December 21, 2022, the Governor of Missouri submitted a petition requesting the removal of the 1-psi waiver in that state.[10] This notice refers to the eight remaining states as the "petitioning states." The petitions included modeling results indicating reductions in VOCs, nitrogen oxides (NOx), and carbon monoxide (CO).

III. Statutory Authority and Provisions to Remove the 1-psi Waver

We are conducting a rulemaking to modify EPA's fuel quality regulations in 40 CFR part 1090 to remove the 1-psi waiver for the eight states that have requested it. Specifically, we are proposing to remove the 1-psi waiver that is applicable to fuel blends containing gasoline and 10 percent ethanol in Illinois, Iowa, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin beginning in the summer of 2024.

CAA section 211(h)(5) was enacted as part of the Energy Policy Act of 2005 (EPAct), and provides that:

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[7] These petitions are available in the docket for this action.
[8] "July 2022 Letter from Governor Laura Kelly," available in the docket for this action.
[9] "October 2022 Letter from Governor Burgum," available in the docket for this action.
[10] This petition is also available in the docket for this action.

> Upon notification by the Governor of a State, with supporting documentation, that implementation of the waiver in section [211(h)(4)], would increase emissions that contribute to air pollution in any area of the state, the Administrator shall, by regulation, apply the volatility limit under [section 211(h)(1)].

CAA section 211(h)(1) requires that gasoline volatility not exceed 9.0 psi during the high ozone season, and that nonattainment areas have a lower (i.e., more stringent) RVP standard. Thus, regulatory action under CAA section 211(h)(5) would remove the 1-psi waiver from E10.

Prior to the April 28, 2022 petition, no governor had ever submitted a CAA section 211(h)(5) request to EPA, and thus we are interpreting this statutory provision for the first time in this action. We find that the use of the prescriptive statutory language "shall" provides limited if any discretion for EPA to consider other issues such as economic impacts of removing the 1-psi waiver. Such impacts are instead appropriately taken into consideration by a governor when deciding whether to submit a petition to EPA.[11] EPA's role in this case is to evaluate the supporting documentation provided by the governors.[12] If EPA concludes that the supporting documentation, as required by the statute, demonstrates emissions increases with the 1-psi volatility waiver in place, then CAA section 211(h)(5) requires EPA to promulgate regulations to remove the 1-psi waiver.

Additionally, we do not interpret the CAA as requiring a demonstration of a reduction in emissions of *all* pollutants that contribute to air pollution in the requesting states. Such a requirement could not have been contemplated by Congress, as lowering the volatility of fuel would be expected to have differing impacts on different emissions. Congress was silent on what air pollutants EPA should consider in responding to petitions for removal of the 1-psi waiver. Specifically, under CAA section 211(h)(5), EPA is to remove the 1-psi waiver if it "increase[s] emissions that contribute to air pollution." This contrasts with, for example, CAA section

[11] Considerations like this were cited by the Governors of Kansas and North Dakota in rescinding their requests.
[12] Legislative history suggests that the supporting documentation need not be as stringent as that called for under Section 211(c)(4)(c) of the CAA. See Senate Report 106-426 at 12 (September 28, 2000).

110(a)(2)(D)(i), which prohibits sources in a state from emitting "any air pollutant which will contribute significantly to nonattainment" in another state. Air pollution could result from a myriad of sources, including listed hazardous air pollutants, criteria pollutants, and greenhouse gases, and thus would appear to be a rather expansive term. Reducing RVP, however, is a volatility control measure as explained earlier in Section II. CAA section 211(h)(1) requires EPA to set RVP standards to address "evaporative emissions." Additionally, EPA has consistently explained that adding 10 percent ethanol to gasoline causes roughly a 1.0 psi RVP increase in the blend's volatility, which is the premise for the 1-psi waiver contained in CAA section 211(h)(4) and the subject of this action.[13] EPA is of the view, therefore, that it is reasonable to consider "air pollution" emanating from such emissions and thus, that it may be more appropriate to evaluate the impact of the 1-psi waiver on VOC emissions.

The U.S. EPA Motor Vehicle Emissions Simulator (MOVES) is an appropriate tool to use to model the emission impacts required by the statute. The MOVES runs performed by the states compared emissions from motor vehicles and nonroad vehicles and equipment with and without the 1-psi waiver for E10 in each state in the summer. Similar analyses have been used to support prior EPA actions in removing federal and state fuel programs in the past.[14]

IV. Petitions for Removal of the 1-psi Waiver and Supporting Documentation

During the fall of 2021, EPA received several letters from states requesting that EPA engage in a dialogue about mechanisms to provide parity between E10 and E15 with respect to gasoline volatility standards.[15] Specifically, the letters referred to CAA section 211(h)(5) and inquired about what type of "supporting documentation" should accompany such a request. EPA organized and participated in a series of meetings with representatives from various Midwestern

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[13] See, e.g, 52 FR 31274 at 31292 (August 19, 1987).

[14] For example, on June 7, 2017, EPA published a final rule to relax the federal 7.8 psi RVP standard in the Nashville, TN area (82 FR 26354) and on March 12, 2021, EPA published two final rules that removed approved regulations from the Kansas and Missouri SIPs that required the sale of 7.0 psi RVP gasoline in the Kansas City, KS-MO area (86 FR 14000 and 86 FR 14007).

[15] See "Letter from Governor Laura Kelly to Administrator Regan," October 13, 2021, and "Letter from Governors Kim Reynolds, Pete Ricketts, Doug Burgum, Tim Walz, Michael Parson, Kristi Noem, and Tony Evers," November 4, 2021, available in the docket for this action.

states that had expressed interest in removing the 1-psi waiver, and in those meetings, EPA indicated that MOVES modeling would be an appropriate tool to use for this purpose given its ability to model the emissions impacts of changes in gasoline volatility and given our past reliance on MOVES modeling runs in similar contexts.

On April 28, 2022, the Governors of Illinois, Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin submitted a joint petition to EPA for the removal of the 1-psi waiver for E10 in their respective states. The petition specifically requested the removal of the 1-psi waiver as a permanent solution to provide year-round E15 in those states beginning in the summer of 2023. As accompanying documentation, the petition provided quantified reductions in VOC, NOx, and CO emissions as a result of removing the 1-psi waiver in each state based on MOVES modeling. Subsequent to this submittal, the Governors of Kansas and North Dakota rescinded their requests to remove the 1-psi waiver for E10 in those states.[16] Therefore, we are not proposing to take any action on the 1-psi waiver in Kansas and North Dakota in this action.

On June 10, 2022, the Governor of Ohio also submitted a petition requesting the removal of the 1-psi waiver for E10 beginning in the summer of 2023. The petition provided quantified reductions in VOC, NOx, and CO emissions in Ohio based on MOVES modeling.

On December 21, 2022, the Governor of Missouri also submitted a petition requesting the removal of the 1-psi waiver for E10 beginning in the summer of 2023. The petition provided quantified reductions in VOC, NOx, and CO emissions in Missouri based on MOVES modeling.

Subsequent to submission of the petitions, all petitioning states except Missouri provided EPA with additional emissions modeling documentation, including for particulate matter (PM) and benzene.[17] The original data submitted showed a decrease in VOC, NOx, and CO emissions

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[16] July 28, 2022, Letter from Governor Kelly of Kansas to EPA, available in the docket for this action. October 13, 2022, Letter from Governor Burgum of North Dakota to EPA, available in the docket for this action.

[17] See "Emissions Impacts of the Elimination of the 1-psi RVP Waiver for E10," May 9, 2022; "Emissions Impacts of the Elimination of the 1-psi RVP Waiver for E10 in Ohio," June 10, 2022, available in the docket for this action. While we have not yet received additional information from Missouri about other pollutants as we have received from the other petitioning states, we anticipate directionally similar trends.

with removal of the 1-psi waiver, while the additional data demonstrated an increase in PM for both nonroad and on-road emissions with removal of the 1-psi waiver. The benzene results demonstrated an increase in benzene on-road emissions, and a decrease in benzene nonroad emissions.

All the petitioning states requested removal of the 1-psi waiver in all areas within their state for which the limitation under CAA section 211(h)(1) applies. Therefore, the requests did not include areas within the states where RFG is required because the 1-psi waiver does not apply to RFG. The petitioning states also requested that the removal of the 1-psi waiver should take effect for the 2023 high ozone season, without further discussion. The states noted that rescinding the 1-psi waiver for E10 would support year-round sales of E15.

V. MOVES Modeling Results

The petitioning states provided technical documentation with their petitions to demonstrate the reduction of emissions with the removal of the 1-psi waiver as required by CAA section 211(h)(5) in the form of MOVES modeling results.[18] The results for each state were based on a single day in July 2023, which falls within the high ozone season. Comparative results demonstrate the change in emissions from the current 10.0 psi RVP standard to the alternative 9.0 psi RVP standard as contemplated by the statute.[19] A summary of the emission impacts of removing the 1-psi waiver for E10 for each state is provided in Table V-1.[20]

[18] EPA developed MOVES to estimate air pollution emissions from on-road and nonroad mobile sources.
[19] Further information about the MOVES runs, including inputs and nonroad data is available in the docket for this action.
[20] EPA's evaluation of the MOVES model input data and assumptions, and results, can be found in the MOVES Technical Support Document for this action.

Table V-1: Change of Mobile Source Emissions in 2023 MOVES3.01 Sources From 10.0 psi to 9.0 psi

	Pollutant/Precursor								
State	CO	NOx	VOC	PM2.5	PM10	Benzene	Toluene	Ethylbenzene	Xylene
Illinois	-0.19%	-0.05%	-0.9%	0.09%	0.10%	-0.2%	-1.5%	-0.9%	-0.9%
Iowa	-0.44%	-0.09%	-1.8%	0.14%	0.15%	-0.1%	-3.3%	-2.1%	-2.1%
Minnesota	-0.52%	-0.09%	-2.7%	0.15%	0.16%	-1.3%	-4.2%	-3.0%	-3.1%
Missouri	-0.41%	-0.14%	-0.66%	N/A	N/A	N/A	N/A	N/A	N/A
Nebraska	-0.48%	-0.09%	-2.6%	0.17%	0.18%	-0.6%	-4.4%	-2.9%	-3.0%
Ohio	-0.45%	-0.13%	-1.6%	0.30%	0.32%	0.08%	-2.8%	-2.0%	-2.0%
South Dakota	-0.53%	-0.06%	-2.9%	0.08%	0.08%	-1.1%	-4.8%	-3.4%	-3.3%
Wisconsin	-0.44%	-0.10%	-1.7%	0.21%	0.22%	-0.3%	-2.7%	-1.8%	-1.8%

Each of the petitioning states' submissions demonstrated reductions in emissions of CO, NOx, and VOCs within the state upon removal of the 1-psi waiver. These demonstrated reductions are sufficient to fulfill the statutes' supporting documentation requirement. We seek comment on this data.

VI. Evaluation of Petitions for Removal of the 1-psi Waiver

We have assessed the supporting documentation provided by the petitioning states and find that the MOVES modeling results submitted to EPA demonstrate a reduction in emissions of multiple pollutants upon removal of the 1-psi waiver for E10, as required under CAA section 211(h)(5). In particular, the modeling demonstrated emissions reductions in CO, NOx, and VOCs. Emissions of these pollutants contribute to air pollution in the states.[21] We note that the same documentation also shows an increase in emissions of other pollutants such as PM. As discussed in Section III, we do not interpret the statute as requiring reductions in all pollutants. Documentation of reductions in several pollutants, including, in particular, VOCs, is sufficient.

Therefore, based on the governors' requests, we are proposing to remove the 1-psi waiver in the petitioning states based on the supporting documentation provided, as required by the CAA.

[21] Evaporative emissions from gasoline, referred to as volatile organic compounds (VOC), are precursors to the formation of tropospheric ozone and contribute to the nation's ground-level ozone problem. Exposure to ground level ozone can reduce lung function (thereby aggravating asthma or other respiratory conditions), increase susceptibility to respiratory infection, and may contribute to premature death in people with heart and lung disease.

VII. Statutory Provisions on Implementation and Effective Date

Under CAA section 211(h)(5)(C), the regulations removing the 1-psi waiver shall take effect on the later of: (1) the first day of the first high ozone season for the area that begins after the date of receipt of the notification; or (2) 1 year after the date of receipt of the notification. The high ozone season is defined in EPA's regulations as "June 1 through September 15 for retailers and [wholesale purchaser consumers (WPCs)], and May 1 through September 15 for all other persons," which includes gasoline distribution terminals.[22]

Under this language, for the petition dated April 28, 2022, the later date is April 28, 2023. Therefore, the earliest date on which the removal of the 1-psi waiver for Illinois, Iowa, Nebraska, Minnesota, South Dakota, and Wisconsin could be effective is April 28, 2023. This date would be in advance of the high ozone season beginning May 1, 2023. For the petition from Ohio, dated June 10, 2022, the later date is June 10, 2023. This would place the effective date within the 2023 high ozone season (i.e., 10 days after the beginning of the high ozone season for retailers and WPCs, and 41 days after the beginning of the high ozone season for all other parties). Finally, for the petition from Missouri, dated December 21, 2022, the later date is December 21, 2023.[23] This would place the effective date after the 2023 high ozone season.

Further, under CAA section 211(h)(5)(C), the effective date can be extended if the Administrator, on his own motion or on petition from any person, after consultation with the Secretary of Energy, determines there would be an insufficient supply of gasoline in a state that has requested the removal of the 1-psi waiver for E10.[24] The statute further provides that the effective date can be extended for not more than one year, and that the Administrator may renew the extension for two additional periods, each of which shall not exceed 1 year.

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[22] 40 CFR 1090.80. We note that given the current definition of "high ozone season," the later date will always be one year after receipt of the request from a governor.

[23] We recognize that the Missouri petition requested that the removal take effect for the 2023 high ozone season. However, such an effective date is not permissible under CAA section 211(h)(5)(C).

[24] CAA section 211(h)(5)(C)(ii).

As described above, EPA is allowed to extend the effective date of the removal of the 1-psi waiver upon a finding of "insufficient supply of gasoline in the [petitioning] state" resulting from "the promulgation of the regulations [to remove the 1-psi waiver]."[25] "Insufficient supply of gasoline" is not defined in the statute, and thus EPA applies its expertise to interpret and apply the phrase in a manner that is consistent with the structure of the statute, historical application of similar or related provisions, and congressional intent. We interpret "insufficient supply of gasoline" to require a demonstration that gasoline supply disruptions are likely resulting from removal of the 1-psi waiver, such that the necessary quantities of gasoline may not be available in the states at the time they are required. It is particularly appropriate in this case to consider the possibility of supply disruptions, and the ability of the fuel to be physically produced and transported to the petitioning states because this action would call for a different grade of gasoline to be produced and transported to the appropriate states. In considering the likelihood of supply disruptions, we look to the entire production and distribution chain, from the refinery where gasoline is produced, through distribution systems such as pipelines and trucking, and ultimately to the retail station. This reading is also similar to EPA's interpretation of other provisions in section 211 that call for consideration of constraints on fuel supply when EPA is acting on petitions within the fuels program. For instance, CAA section 211(k)(6)(A)(ii) allows EPA, after consultation with the Secretary of Energy, to extend the effective date for a state that has petitioned to opt into the RFG program for a period that is up to one year from the date of receipt of the petition upon a finding of insufficient domestic capacity to produce RFG. A related provision in CAA section 211(k)(6)(B)(iii) would allow the Administrator to extend the effective date for areas within the ozone transport region established under CAA section 184 that opt into RFG , upon a finding of insufficient capacity to supply RFG. Like the phrase "insufficient supply of gasoline" in CAA section 211(h)(5)(C), the statute does not define either "insufficient domestic capacity" or "insufficient capacity to supply RFG." But in acting on petitions to opt-

[25] CAA section 211(h)(5)(C).

into RFG, EPA has explained that setting the effective date allows the Administrator to consider any sudden and unexpected increases in the demand for RFG on the local supply and distribution system that is caused by an opt-in.[26]

In contrast, the phrase "insufficient supply of gasoline" differs from other sub-provisions of CAA section 211 allowing for waivers of applicable requirements as well as implementation delays that use language such as "inadequate domestic supply."[27] The D.C. Circuit has provided guidance on the meaning of "inadequate domestic supply" in CAA section 211(o)(7)(A)(ii), finding that EPA may properly consider "supply side factors – such as production and import capacity," but not downstream effects.[28] While the analysis supporting such findings is likely to be similar for these production factors, we find that under CAA section 211(h)(5), the analysis properly should consider production factors, as well as the distribution of fuel from the refinery, through the distribution chain, including pipelines and terminals, to the ultimate endpoint of the gasoline distribution chain, the retail station. CAA section 211(h)(5) explicitly contemplates the "supply of gasoline in the State," whereas CAA section 211(o)(7)(A)(ii) did not further modify "supply."[29]

EPA's reading of "adequate supply" in CAA section 211(c)(4)(C)(ii) would also appear to comport with our interpretation of CAA section 211(h)(5)(C) given that Congress intended for EPA to act within certain unique emergency circumstances to relieve supply disruptions within the "motor fuel distribution system."[30] And while "motor fuel distribution system" is not defined

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[26] 62 FR 30261, 30263 (June 3, 1997)("Section 211(k)(6)(A) of the Act gives the Administrator discretion to "establish an effective date * * * as he deems appropriate* * *." EPA interprets this provision to mean that it has broad discretion to consider any factors reasonably relevant to the timing of the effective date. This would include factors that affect industry and the potential opt-in area. The factors that affect industry could include productive capacity and capability, other markets for RFG, oxygenate supply, cost, lead time, supply logistics for the area, potential price spikes, and potential disruption to business.")

[27] See CAA section 211(m)(3)(C), 211(o)(7)(A)(ii).

[28] See *Americans for Clean Energy v. EPA*, 864 F.3d 691, 710 (2017). Notably CAA section 211(o)(7)(A)(ii) does not specify the product that is to be inadequate or to whom the supply is inadequate. This is in contrast to 211(h)(5)(C)(ii) which provides that it is an insufficient supply of gasoline in the petitioning state.

[29] CAA section 211(h)(5)(A). [T]he Administrator shall, by regulation, apply, in lieu of the Reid vapor pressure limitation established by paragraph (4), the Reid vapor pressure limitation established by paragraph (1) to all fuel blends containing gasoline and 10 percent denatured anhydrous ethanol that are sold, offered for sale, dispensed, supplied, offered for supply, transported, or introduced into commerce in the area during the high ozone season.

[30] CAA section 211(c)(4)(C)(iii)(V).

in the statute, EPA's historical practice in granting waivers under section CAA section 211(c)(4)(C)(ii) has been to consider all stages of the gasoline production and distribution system within states that are experiencing emergency circumstances.

Finally, we note that consideration of the effective date for this action properly considers supply to the ultimate consumer given the statutory language "in the State." Therefore, our analysis of "insufficient supply of gasoline" properly considers all stages of the gasoline production and distribution system, from the refinery to the retail station.

VIII. Fuel System Impacts

In this section, we discuss the potential impacts of removing the 1-psi waiver in the petitioning states on the fuel production and distribution system, including impacts that would potentially affect gasoline refineries, pipelines, fuel terminals, retail stations, and, ultimately, consumers. Further detail on this topic is available in the "Technical Support Document for the Proposed Removal of the 1-psi Waiver."

In short, this proposed action would require a lower volatility conventional gasoline before oxygenate blending (CBOB)[31] to be produced by refineries and distributed by pipelines and terminals, and, for the blended fuel, ultimately sold at retail stations in the petitioning states.[32] For much of the area covered, the new lower RVP fuel would simply replace the existing fuel, in which case the impacts are primarily associated with the refinery changes needed to produce the new fuel. However, in many areas, this would be a new fuel in addition to the fuel designed to utilize the 1-psi waiver upon blending of 10 percent ethanol (e.g., a terminal or refinery that distributes gasoline to states both with and without the 1-psi waiver). In these

[31] Gasoline before oxygenate blending (BOB) means gasoline for which a gasoline manufacturer has accounted for oxygenate (e.g., denatured fuel ethanol) added downstream. See 40 CFR 1090.90. BOB is subject to all requirements and standards that apply to gasoline under EPA's fuel quality regulations, and refineries typically formulate their BOBs with the intent that it will be blended downstream with ten percent ethanol content to maintain compliance with EPA and industry specifications. Conventional BOB (CBOB) is BOB produced or imported for areas outside of RFG areas otherwise known as conventional areas.

[32] Because the gasoline distribution system has been configured to utilize 10 percent ethanol and optimized to utilize the octane value of ethanol, we expect ethanol to be blended at least at the same levels it is blended today. Thus, we anticipate that E10 would continue to be the dominant form of gasoline supplied to the region, but would now be blended into a lower volatility blendstock produced by the refineries.

areas, there would be additional impacts associated with fuel distribution system changes needed to distribute the additional grades (regular and premium) of the new lower RVP blendstocks.

We note first that volatility controls for gasoline differ across various states and regions within states. Summer gasoline for use in the continental U.S. must comply with either the federal RVP standard of 9.0 psi or the more stringent RVP standard of 7.8 psi, unless the summer gasoline is either for use in an RFG covered area, is subject to California's gasoline regulations, or EPA has waived preemption and approved a state request to adopt a more stringent RVP standard into a State Implementation Plan (SIP). Most of the U.S. utilizes "conventional gasoline," for which the federal RVP standard is 9.0 psi, with a 1.0 psi allowance for gasoline blended with 10 percent ethanol. There are also areas that utilize conventional gasoline for which the federal RVP standard is 7.8 psi, and in such regions, the 1.0 psi allowance also applies for gasoline blended with 10 percent ethanol.[33] Several states have "boutique" low RVP fuel programs or SIP programs[34] that allow the 1-psi waiver for gasoline blended with 10 percent ethanol.[35] Some boutique fuel programs, or SIP-approved fuel programs, however, disallow the 1-psi waiver for gasoline blended with 10 percent ethanol and in those areas, such gasoline must meet the applicable state RVP standard of either 9.0 psi, 7.8 psi, or 7.0 psi.[36] Additionally, approximately 30 percent of the gasoline sold in the U.S. is RFG, which must meet a 7.4 psi RVP standard.[37] The 1-psi waiver does not apply to RFG, and thus E10 gasoline blended with 10 percent ethanol that is sold in RFG areas must meet the 7.4 psi RVP standard. This proposed action would remove the 1-psi waiver only for conventional gasoline that is sold in the petitioning states and not such gasoline sold in RFG and SIP program areas. However, due to the interconnected nature of gasoline distribution, and the changes required for a new fuel type,

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[33] 40 CFR 1090.215(a)(2), (b)(1).
[34] Of particular note for this action, seven counties in southeast Michigan that border Ohio have an RVP standard of 7.0 psi in the summer, with a 1-psi waiver for E10.
[35] See *https://www.epa.gov/gasoline-standards/state-fuels*.
[36] 40 CFR 1090.215(b)(3). See also *https://www.epa.gov/gasoline-standards/state-fuels*.
[37] 40 CFR 1090.215(a)(3). The Chicago and St. Louis areas are such RFG areas.

impacts on gasoline quality and supply would be expected to extend beyond the petitioning states, as further described below.

A. Production

We begin with a discussion of the necessary modifications to refineries to supply a lower volatility gasoline. There are 11 petroleum refineries located within the petitioning states; that number increases to 40 refineries if refineries located in states that border the petitioning states are included. However, additional refineries outside of the immediate region may modify their operations to provide a lower RVP fuel, as currently some of the gasoline supply for the petitioning states also comes from refineries located further west, east, and south, including refineries in the Gulf Coast.[38] For example, gasoline sold in Iowa is often produced by refineries located in Texas and distributed via pipeline. Therefore, this action could result in changes at refineries both within and outside of the Midwest region. Under EPA's current fuel quality regulations, most refineries producing gasoline for use in the petitioning states produce a CBOB with an RVP standard of 9.0 psi during the summer season, with the 1-psi waiver allowing the final gasoline-ethanol blend to meet an RVP standard of 10.0 psi when 10 percent ethanol is added downstream. With the removal of the 1-psi waiver, refineries that produce CBOB for use within the petitioning states would be required to make changes to their operations to reduce the volatility of the CBOB distributed to these states to approximately (or slightly below) 8.0 psi in order to enable the final gasoline-ethanol blend to comply with the 9.0 psi RVP standard, which could have corresponding impacts on the supply of gasoline. For some refineries, removal of the 1-psi waiver may result in the refinery reducing the volatility of all the CBOB they produce. For other refineries, it may result in a choice to produce a new 8.0 psi RVP CBOB for distribution to the petitioning states, while continuing to produce the current 9.0 psi RVP CBOB for distribution

[38] According to the Energy Information Administration (EIA), 64 million barrels of gasoline were shipped from PADD 3 into PADD 2, which corresponds to about 8 percent of the volume of gasoline consumed in PADD 2. Movements by Pipeline, Tanker, Barge and Rail between PAD Districts, PADD 3 to PADD 2; *https://www.eia.gov/dnav/pet/pet_move_ptb_dc_R20-R30_mbbl_m.htm*.

to other states.[39] At this time, we cannot predict which of the refineries that currently produce fuel for use in the petitioning states would choose to produce 8.0 psi RVP CBOB for use in the petitioning states. Unlike a nationwide change to the RVP of CBOB, the regional nature of this action means that not all refineries must adjust their refining processes to provide a lower RVP CBOB. While it is highly likely that refineries that supply gasoline only to the petitioning states would adjust their refinery processes to reduce the RVP of their CBOB, these refineries could choose to avoid the necessary investments and provide 9.0 psi RVP CBOB to non-petitioning states instead.

Throughout the year, refineries must adjust the volatility of their gasoline—typically lowering volatility of the gasoline in the summer and increasing the volatility in the winter by adjusting the quantity of light hydrocarbons in their gasoline. Refineries typically control gasoline volatility by adjusting the amount of butane in gasoline, but sometimes they need to also modify the amount of pentane in gasoline. Refineries providing fuel to the petitioning states would have to modify their summertime production operations and potentially add capital equipment to accommodate the 1-psi lower RVP standard in the summer. A refinery's ability to adapt to the 1-psi lower RVP standard and the time that it takes depends on the refinery's structure, operations, and the crude slate they run. Further discussion of the changes we expect from refiners associated with removal of the 1-psi waiver is available in to the "Technical Support Document for the Proposed Removal of the 1-psi Waiver."[40]

In addition to contributing to gasoline's volatility, butane also contributes to gasoline's octane and volume. Thus, when removing butane, refineries must also make other changes to replace the lost octane in order to keep the product consistent and in compliance with EPA and

[39] Certain areas within the petitioning states and other states already have more stringent RVP standards during the summer. Gasoline that refineries produce for these areas would be unaffected by this proposed rule. Refineries that produce 7.8 psi RVP CBOB for the 7.8 psi RVP areas, or 7.4 psi RVP RBOB for RFG areas could expand production of these grades for use in these states rather than create a new grade at 8.0 psi RVP. This may reduce distribution cost complexity, but in exchange increase refinery production cost and lower gasoline production volume.

[40] Available in the docket for this action.

industry specifications. Refineries could produce more alkylate or reformate, which are two high octane gasoline blendstocks, to make up the lost octane. We estimate that the amount of butane that would have to be removed to produce a gasoline 1 psi lower in RVP amounts to about 2 volume percent of the volume of gasoline that would be sold to the petitioning states, which will affect the supply of gasoline in those states.

Regardless of how a refinery is modified to lower the RVP of gasoline, it will result in additional butane being produced by the refinery. If excess onsite butane storage capacity is available, the refinery has the option of saving excess butane on-site for use in winter gasoline production, which would minimize the cost impact of the removal of the 1-psi waiver. However, if excess butane storage is not available, the refinery would then need to store it offsite (e.g., in caverns), sell it, or export it. This may require additional butane rail cars and refinery upgrades for handling rail cars. Refineries may also utilize some portion of the butane as a feedstock to their alkylation unit. In the near term, the large additional influx of excess butane may exceed the existing storage capacity, transport capacity, amount desired in the markets, or alkylation unit capacity. This could then limit refinery flexibility to produce gasoline, further impacting supply and production costs.

Given the high demand for gasoline in the summer months, refineries often begin producing summertime fuel for storage well ahead of the upcoming high ozone season. This process can begin as early as December of the year prior to the applicable high ozone season, and thus storage of a differing volatility of fuel could impact the refinery's ability to utilize the fuel the next summer without further modification.

B. Distribution

As discussed above, this rulemaking would require a new lower RVP grade of gasoline to be produced by refineries that distribute gasoline to the petitioning states. In some areas, this may mean producing an additional grade of gasoline. An additional gasoline grade would require parties involved in gasoline distribution to reconfigure their pipelines, terminals, and operations

in order to accommodate such a fuel grade. Such changes are likely to affect distribution both within and outside of the petitioning states given the interstate nature of gasoline distribution. There are three primary groups within the distribution chain that would be impacted: refineries, pipelines (with their breakout terminals), and downstream product terminals.

1. Refinery Distribution

Most refineries have an onsite terminal with numerous product storage tanks wherein they accumulate and store the range of products that they produce prior to placing the products into the distribution system. Once a refinery accumulates a sufficient volume of a gasoline type and confirms that it meets the applicable gasoline specifications, the refinery then schedules the shipment of that batch of gasoline to downstream markets. Shipment can occur via an onsite product terminal analogous to that discussed in Section VIII.B.3 where trucks load product and deliver to retail stations. However, most gasoline is loaded onto product pipelines for delivery to downstream product terminals. In some cases, refineries also distribute product by rail or barge. For those refineries that distribute all, or even most, of their gasoline to the petitioning states, this proposal will have little impact on their distribution operations. They can switch over their existing product tanks to hold only the lower RVP gasoline blendstock. However, for those refineries that produce gasoline for both the petitioning states and non-petitioning states, they may need to add additional tanks, pipes, manifolds, and control systems to store the additional grades of gasoline. The time needed to plan, design, permit, and construct additional tankage is typically on the order of two or more years. Until this can be accomplished, the refinery may need to shift some or all of its production to the lower RVP blendstock.[41] This could then result in a period where the market goes through a sorting out process wherein different refineries focus on different products and shift their historic markets, perhaps requiring more of one product or requiring another product to flow in from outside the petitioning states (e.g., from

[41] Alternatively, some refineries may shift all premium grade fuel to the lower RVP, while maintaining production of the lower RVP and 9.0 psi RVP CBOBs.

Gulf Coast refineries). All of this can have significant impacts on gasoline supply not only on the petitioning states, but also on the surrounding states. It may be that, due to tankage and logistical limitations, refineries serving both markets may all initially shift all of their production to the lower RVP blendstock. This would result in lower RVP fuel in the surrounding states and compound the overall impact on gasoline supply of butane removal.

In addition to tankage changes, the refineries would also need to adjust their operations and schedules for loading gasoline blendstock onto pipelines, barges, or rail in order to split their production into separate product streams. These logistical changes would initially take some period of time in order to occur smoothly and safely but should streamline over time.

2. Pipelines and Pipeline Breakout Terminals

The majority of fuel in the U.S. flows from refineries to markets via pipeline systems. Because refineries are located throughout the Midwest, the pipeline companies must pick up these gasoline batches where they are located, which can be at the start, middle, or even near the end of the pipeline; the gasoline then moves to its destination markets. As discussed in Section VIII.B.1, some portion of gasoline produced for use in the petitioning states comes from refineries located outside the petitioning states.

There are a number of pipeline systems serving the petitioning states, the vast majority of which serve both the petitioning states as well as non-petitioning states.[42] The pipelines transport a wide variety of fuels and other products (e.g., gasoline, diesel, jet fuel, heating oil, petroleum blendstocks, etc.), including an array of different grades of gasoline (e.g., conventional gasoline, RFG, state specific grades, and regular and premium grades of each). Each grade and type of gasoline must be segregated from other grades and types to preserve the physical properties of each product. Consequently, the addition of the new lower RVP gasoline blendstocks required for the petitioning states would require significant changes in the operations of the pipeline

[42] See, "Technical Support Document for the Proposed Removal of the 1-psi Waiver," available in the docket for this action.

systems. What was one large fuel market would now be divided in two, requiring smaller batch sizes, changes in scheduling, and in some cases cutting off historic supplies from some sources and making changes to find alternative sources of supply. There would thus be a period where the pipeline systems go through a planning and optimization process in order to adjust to the new fuel requirement. Decisions from refineries on whether they will supply a lower RVP CBOB, and at what volumes, would be necessary to inform the planning and optimization process by pipeline systems. All of this can have significant impacts on gasoline supply not only to the petitioning states, but also to the surrounding states in the short term. Having the wrong fuel grades in the wrong volume can result in an inability for the pipeline to move fuel in and out of tankage as needed, which, in turn, can result in significant fuel supply disruption not only for the gasoline grade in question, but also for all of the fuels shipped on the pipeline. For the longer term, due to the bifurcation of the market into different grades, some areas in the petitioning states may lose redundancy for supply, which may then lead to more frequent shortfalls in supply during times of disruption (e.g., refinery fire, pipeline outage, hurricane, etc.).

The most significant impact on pipeline operations from the bifurcation of the gasoline supply caused by a final action on this proposal, however, will be on pipeline breakout tankage operations. Breakout tankage is required at junctions where pipelines connect with differing schedules and flow rates. Thus, the pipelines typically need tankage to store every grade of product distributed on the pipeline, with the size and configuration of the tankage matched to the product and pipeline batch sizes. If new regular and premium grades of the lower RVP CBOB needs to be shipped on the pipeline, then it may require the addition of new tankage at these breakout tank facilities. The planning, permitting, and construction of such additional tankage would require two or more years. This is likely to be an issue at a number of breakout tankage facilities both inside and outside the petitioning states. Until this additional breakout tankage can be brought into service, an impacted pipeline serving the area may be restricted to distributing either the higher or lower RVP gasoline, limiting gasoline supply to either the petitioning states

or the other surrounding states, and in turn restricting what the refineries shipping on the pipeline are able to produce if the pipeline restrictions do not allow for the distribution of a particular type of gasoline. Some pipelines may opt to carry one fuel grade and some the other, limiting the product offerings at the various downstream product terminals. As with the refineries, it may be that due to tankage and logistical limitations, pipelines currently serving both markets may initially shift all of their production to the lower RVP blendstock. This would result in lower RVP fuel in the surrounding states and compound the impact on supply of butane removal. Pipelines would have the option to blend in butane during gasoline transport to the states with the 1-psi waiver that are located at the end of the pipeline systems (e.g., North Dakota and Michigan). This would alleviate some of the excess butane produced from refineries in the affected states and could reduce consumer costs in the border states by blending up to 9.0 psi RVP gasoline. This method could ease some of the fungible pipeline bifurcation issues by allowing more of the lower RVP gasoline to be produced. However, similar to refineries, not all pipeline and terminal facilities currently have the existing infrastructure to utilize butane blending. Additional tankage and equipment may be needed to maximize the potential of this opportunity.

Some pipeline companies operate a fungible distribution system. This allows them to collect a standard grade of gasoline from refineries into their system and "transport" the barrels quickly to their destination. The barrels delivered are not actually the purchased barrels from the refinery, but rather the same product meeting the same specifications from another refinery. An additional grade of gasoline would disrupt their ability to function as efficiently using the fungible system. This increases the complexity associated with ensuring products are able to be distributed to locations in the time frame needed to ensure supply to the market.

3. Product Terminals

Moving gasoline to market also involves the downstream product terminals and bulk plants. The product terminals and bulk plants accumulate gasoline from pipelines and other bulk

distribution systems and distribute the gasoline to retail outlets via tank trucks loaded at racks at the terminal. Each rack has the ability to load several different grades of gasoline depending on how they were constructed; all racks can load premium and regular gasoline, but some racks have added additional changes to accommodate additional grades of gasoline at the same time. The potential impact on product terminals varies depending on whether the terminals provide gasoline only in the petitioning states, or in non-petitioning states as well. Those terminals that only provide gasoline to the petitioning states would be little impacted, as they would simply take delivery of replacement grades of lower RVP CBOB beginning in the spring leading into the summer season. They would not have to contend with adding additional fuel grades and the tankage and logistics associated with them. This would most likely not be the case for terminals that serve areas both within and outside the petitioning states. If such terminals do not have sufficient onsite tankage capacity to handle the additional regular and premium grades of lower RVP CBOB, then they would need to either add the tankage or choose to focus on one market or the other. The decision to focus on a particular market or fuel type may also be dictated by a fuel marketer on the retail side. Both of these options could have fuel supply, cost, and price impacts both within the petitioning states and in the surrounding areas the terminals serve. Approximately 75 such terminals are located close to the borders (i.e., 30 miles) between petitioning states and non-petitioning states. These terminals are more likely to provide gasoline to both types of states and would need to change their gasoline distribution patterns if they lack extra tankage to handle the additional lower RVP gasoline grades.[43] Since terminals can serve gasoline markets up to 200 miles away, the number of terminals impacted could be significantly greater.

Regardless of whether the terminals serve only the petitioning states, or also other states, the terminals would all be impacted to some degree by a somewhat more challenging transition in the spring from winter gasoline to summer gasoline, particularly in the first year. While this

[43] EIA. U.S. Energy Atlas - Oil and Natural Gas Maps. *https://www.eia.gov/maps*.

transition occurs every year as the terminals blend down the volatility of the gasoline they have in storage from the higher RVP of winter gasoline to the lower RVP of summer grades, the change of having to blend down to ~8.0 psi RVP CBOB instead of ~9.0 psi RVP CBOB would require additional time and incur additional cost. Due to blending realities, pipelines and terminals would request lower RVP fuel to blend down to a fuel that meets the RVP specifications; to achieve an ~8.0 psi RVP CBOB, blending of gasoline with an RVP as low as 6.0 psi is likely to be necessary. Terminals additionally would likely take steps to ensure tanks are drained as low as possible prior to receiving a lower RVP gasoline, which could add to timing constraints. This would likely occur more frequently at terminals near the border of the petitioning states.

4. Tank Trucks

Moving gasoline to market also involves tank trucks that deliver the gasoline to the retail stations. In some respects, their operations should be little impacted by the lower RVP standard for gasoline in the petitioning states; they would simply pick up a different grade of gasoline from the product terminal than they did before. However, depending on the changes in product offering at the terminals, there may still be considerable stress put on their operations. If some refineries, pipelines, or terminals limit their product offering to either the lower or higher RVP grades, especially in the near term, then the tank trucks would need to shift their operations accordingly. In some cases, this would be expected to increase the distances traveled, which may in turn require the purchase of additional tank trucks and hiring of additional drivers. As with the rest of the distribution system, this can all be accomplished, but would take some time for the market to respond and optimize around the new norms.

C. Retail Operations

The proposed removal of the 1-psi waiver and resulting transition from 10.0 psi RVP gasoline to 9.0 psi RVP gasoline received from the terminal should be minor for the retail stations—they would simply take delivery of the lower volatility gasoline from the terminal. The

most noticeable effects would be seen at retail stations near the borders of states maintaining the 1-psi waiver, as the cost of 9.0 psi RVP gasoline within the petitioning states is likely to be higher than that of 10.0 psi RVP gasoline across the border in the other states. The retailers within the petitioning states may have to charge higher prices to recoup this cost, which could result in consumers preferentially choosing to refill at stations across the border when possible.[44] The retail operations located near state lines on the border of petitioning and non-petitioning states may have issues scheduling gasoline shipments to their retail outlets if tank trucks are shipping their gasoline from terminals located further away and if there is an initial shortage of tank truck operators, particularly at the beginning of the transition to the new lower RVP fuel.

IX. Cost Impacts

There are associated costs with the changes to the refining and distribution systems described in Section VIII. Part of the cost would be incurred by the refining sector, while another portion would be incurred by the gasoline distribution system. This is discussed briefly below with a more in-depth discussion in the "Technical Support Document for the Proposed Removal of the 1-psi waiver."

The refining sector would incur a cost in several different ways. The largest portion of the cost is the lost opportunity cost for having to sell the removed butane at market prices for butane instead of blending it into high value summer gasoline. There are also additional capital and operating costs as described in Section VIII.A that would need to be recouped over time. Two separate refinery modeling studies conducted by Mathpro examined the long-term refining cost for removing the 1-psi waiver—one conducted for the Renewable Fuels Association (RFA)[45] and another conducted for the International Council on Clean Transportation (ICCT).[46]

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[44] This phenomenon is observed today in SIP and RFG regions.
[45] "Assessment of a 1-psi reduction in the RVP of Conventional Gasoline Blendstock (CBOB) in the Summer Gasoline Season," prepared for Renewable Fuels Association by Mathpro, December 1, 2021.
[46] Refining Economics of a National Low Sulfur, Low RVP Gasoline Standard; prepared for the International Council for Clean Transportation.

Both Mathpro studies estimated refining costs to be about 2 cents per gallon, but their analysis assumed three years of lead time and assumed that the entire nationwide conventional gasoline pool would be converted over to the lower RVP gasoline. We seek comment on whether these costs might be different if EPA were to use different assumptions, including a shorter lead time and only regional application to the petitioning states, as opposed to analysis of the change nationwide. Mathpro did not assess or quantify the additional costs that would likely be incurred by the fuels distribution system to distribute 8.0 psi RVP CBOB in addition to the present slate of gasoline grades currently being provided. As described in Section VIII.B, the need to distribute an additional grade of gasoline would require changes in the operations of pipeline, terminals, and tank trucks, and in some cases would be expected to require an additional set of gasoline storage tanks or tank trucks. There likely would be other costs associated with distributing an additional grade of gasoline. Since conventional gasoline consumed in the Midwest would be divided between the two different gasoline grades, gasoline batch sizes would be smaller in many cases, which would increase the cost of distributing both gasoline grades. Furthermore, if refineries serving the Midwest only produce one of the two gasoline grades, it could mean that other refineries would have to produce a portion of the gasoline previously served by that refinery, and the gasoline sold by both of those refineries would likely need to be moved further distances than before, increasing the distribution cost for both refineries' gasoline. Similarly, if downstream terminals decide to only sell one of the two gasoline grades, which requires that they sell solely into petitioning states or non-petitioning states, it likely would require that the trucks that distribute the gasoline from that terminal would have to travel further distance than they currently do.

The cost estimates detailed in the "Technical Support Document for Proposed Removal of the 1-psi Waiver" reflect cost impacts assuming the fuels market has had the chance to make the necessary investments to accommodate the change. In the near term, while the market is going through the iterative process of deciding what parties produce and distribute which fuels

for which markets and before the necessary capital has been invested, constructed, and put into service, the impacts on supply could have a substantially higher impact on the gasoline prices consumers pay. The current gasoline supply shortfall in the Midwest may provide one indication of what supply-induced gasoline price impacts may be. As further described in the "Technical Support Document for Proposed Removal of the 1-psi Waiver," in late summer the low volume of gasoline storage in the Midwest grew to about 8 percent lower than the five-year minimum levels due to a supply shortfall there. This may explain why regular grade conventional gasoline was priced about 28¢ per gallon higher in the Midwest than Gulf Coast prices compared to previous years. This low gasoline inventory in the Midwest may be the cause of even larger impact on RFG pricing. Such large price impacts due to short term supply circumstances, particularly as compared to cost impacts, are possible should a drop in supply occur as a result of the removal of the 1-psi waiver in 2024.

X. Proposed Finding of Insufficient Supply and Delay of Effective Date

In this action, we are proposing an effective date of April 28, 2024, for all petitioning states. After consideration of the extension petitions, we are proposing a 2024 effective date after determining that a 2023 implementation would result in insufficient supply of gasoline in the petitioning states.[47] Our finding of insufficient supply is based on an assessment of three potential supply constraints: (1) The already low gasoline inventories; (2) The need for early coordination between various parties to make the necessary physical changes to the gasoline production and distribution infrastructure and the associated lead time required; and (3) The physical loss of supply necessary to produce a lower RVP gasoline. We believe that these constraints are likely to lead to supply disruptions in the petitioning states.

Gasoline inventories in the Midwest are currently well below the five-year average minimum levels, and at the end of January 2022, were the lowest recorded since 1990 which the

[47] While the statute contemplates extensions of up to one year, with opportunity to renew the extension for an additional two years, the "renew" language indicates a need for EPA to do so in a subsequent, separate action.

earlies year data is available.[48] An emergency refinery closure in the Midwest has reduced the volume of gasoline available in the region, and as of February 2023 the refinery has remained shuttered. The gasoline inventories typically recover over the winter in the Midwest; however, they have remained low and this could lead to a shortfall in supply when gasoline demand increases in the summer of 2023. EIA estimates a further increase in gasoline demand in 2023 compared to 2022.[49] If realized, this increased demand may be difficult to meet even without a change to the gasoline volatility standard.

Second, timing considerations to supply a new lower RVP CBOB would require coordinated investments, planning, and actions between refineries, pipelines and other fuel distribution companies, terminals, and retail outlets. Typically, this coordination occurs before winter to provide the fuel system a chance to make the proper preparations. We are now past the point in the calendar (late fall of the prior year) when such coordination typically occurs. We are also entering into the timeframe when refineries already have to begin producing fuel for use in the summer months. As such, refineries would not have sufficient and appropriate notice to begin modifying their fuel supply for the 2023 summer season.

Third, a reduction in supply is likely to occur simply as a result of the changes necessary to refine and distribute the lower RVP gasoline to the petitioning states. The removal of the light hydrocarbons to produce the lower RVP gasoline is estimated to reduce gasoline supply to the petitioning states by two percent, if refineries have the necessary equipment to remove, store, or sell the removed light hydrocarbons. It is likely that this necessary equipment would not be available for all refineries in the summer of 2023, thus complicating the process, and requiring an additional reduction in supply. The distribution system is likely to need additional fuel storage capacity to store and distribute the new fuel. These changes are also unlikely to be

[48] Total Motor Gasoline Stocks, Weekly Stocks; Petroleum and Other Liquids, US Energy Information Administration; *https://www.eia.gov/dnav/pet/pet_stoc_wstk_dcu_nus_w.htm*.
[49] EIA. Short Term Energy Outlook (STEO). October 2022.

accommodated ahead of the 2023 summer season. At this time, we cannot quantify the gasoline supply impacts as a result of distribution issues; we seek input on such potential impacts.

Reductions in gasoline supply due to lowering the RVP of CBOB at the refinery could be made up through additional supply from other refineries in areas such as the Gulf Coast, or through additional production from Midwest refineries. However, without appropriate notice of this change, such reductions are not possible for the 2023 summer season. Additionally, the distribution infrastructure, including pipelines, terminals, and tank trucks, could allow for the distribution of lower RVP CBOB to the petitioning states. However, for such changes to mitigate any supply concerns, various market participants would require significant notice – first to the refineries at the beginning of the distribution chain, and then to each party downstream. Inherent in requiring a different grade of gasoline is a reduction in the fungibility of the gasoline supply system, thus increasing the likelihood of supply disruptions due to intermittent disruptions such as natural disasters and unanticipated refinery or pipeline shutdowns.

Based on the above assessment, EPA finds that the removal of the 1-psi waiver in petitioning states, if it were to take effect for the 2023 high ozone season, would result in an insufficient supply of gasoline in those states. As a result, EPA is proposing to delay the effective date of the removal of the 1-psi wavier by one year to April 28, 2024. This is the latest possible date for the initial petitions from Illinois, Iowa, Minnesota, Nebraska, South Dakota, and Wisconsin. We find it appropriate to have a single effective date for all petitioning states.

We seek comment on this proposed effective date, including whether this effective date provides sufficient notice to affected parties, and whether any necessary changes could be made in this timeframe to accommodate a summer 2024 effective date, or whether a renewal of the extension may be necessary.

XI. Associated Regulatory Provisions

We are proposing a new designation and associated product transfer document (PTD) language for summer CBOB in states where the 1-psi waiver for E10 has been removed under

CAA section 211(h)(5).[50] Designations and PTD language requirements help ensure that batches of fuel are distributed and used in a manner consistent with EPA's fuel quality requirements. Without proper designation, summer gasolines with different volatilities intended for use in different areas may get commingled in a fungible system, causing the introduction and use of non-compliant gasoline in areas that require lower volatility fuels in the summer. Similarly, PTD language serves to ensure that parties in the fuel distribution chain are aware of the designation of the fuel and accompanying Federal requirements for the distribution and use of the fuel. Because we are proposing requirements for new grade of summer CBOB in this action, we need to create a new designation and accompanying PTD language to ensure that the new CBOB is distributed and used consistent with the RVP requirements.

We are proposing that gasoline manufacturers would designate summer CBOB for use in states where we have removed the 1-psi waiver as "Low-RVP Summer CBOB." We are also proposing related changes to the PTD language requirements so that gasoline manufacturers that produce Low-RVP Summer CBOB could accurately and consistently describe the fuel designation. All other designation and PTD provisions would still apply (e.g., those designations related to the blending of ethanol). We believe this approach is the most straight-forward method for updating the designation and PTD requirements for Low-RVP Summer CBOB, and we seek comment on the new designation and related PTD language.

Based on discussions with affected stakeholders, we also considered whether it would be possible to use the existing designations of "7.8 Summer CBOB" for 9.0 psi RVP areas or the "SIP-controlled Summer CBOB" designation. The potential advantage of using existing designations is that the fuel distribution system would not have to adjust to the new product designation. However, we believe that there are potential disadvantages to using existing designations for low-RVP CBOB. First, we believe that most CBOB manufacturers would wish

[50] The designation and PTD language requirements for gasoline are located at 40 CFR 1090.1010 and 1090.1110, respectively.

to target an RVP level of slightly higher than 7.8 psi to meet the 9.0 psi RVP standard. This could result in a CBOB that simultaneously could not lawfully use the 7.8 psi RVP designation because the RVP was too high or use the 9.0 psi RVP designation because the CBOB may be treated fungibly with other CBOBs that are intended for the 1.0-psi waiver for E10. Second, in the case of SIP-controlled Summer CBOB, the designation is not intuitive because this action is not part of any SIP and may result in confusion on the part of parties that distribute such CBOB. Because we believe that a new designation would much more effectively communicate to parties in the distribution chain how the low-RVP CBOB could lawfully be used more effectively than the existing designations, the use of the existing designations for such CBOB is not appropriate and are proposing a new designation as discussed above. Nevertheless, we seek comment on whether and how we could use the existing designations for this CBOB instead of creating a new designation.

In addition to proposing regulatory changes to effectuate the removal of the 1-psi waiver in the petitioning states, we are also proposing a regulatory mechanism for states to request the reinstatement of the 1-psi waiver under CAA section 211(h)(5). This would be available for the petitioning states, as well as any other state for which EPA removes the 1-psi waiver upon a request under CAA section 211(h)(5) in the future. During discussions with states and stakeholders, parties inquired whether such a provision could be included in this action. Regulations associated with such a request would provide all states with criteria under which such a request could be made and granted. We are proposing regulations allowing for the reinstatement of the 1-psi waiver that are modeled on the existing regulations in 40 CFR part 1090.295 that allow for the removal of 7.8 psi low-RVP fuels programs.[51] Removal of federal 7.8 psi low-RVP fuel programs is appropriately conditioned on either the ability of a state to demonstrate continued maintenance of the relevant ozone national ambient air quality standard

[51] In this action we are not reopening the regulations associated with removal of a federal 7.8 psi low-RVP program in a given area (40 CFR 1090.295) or the regulations that allow states to opt-out of the federal RFG program (40 CFR 1090.290). Any comments related to these provisions will be treated as beyond the scope of this action.

(NAAQS) in an area (i.e., the state may have included emission reductions from the federal 7.8 psi low-RVP fuel in its plan for the area to maintain the relevant ozone NAAQS) or the ability of the state to demonstrate that removing the requirement for the federal 7.8 psi low-RVP fuel in a nonattainment area would not interfere with any applicable requirement for attainment or reasonable further progress or any other applicable requirement of the CAA (i.e., the state may have included emission reductions from the federal 7.8 psi low-RVP fuel in its plan for the area to attain the relevant ozone NAAQS).[52] We are proposing to only require a state to request the reinstatement of the 1-psi waiver in order for EPA to reinstate it, however, if the state has relied on the 1-psi waiver removal in a SIP, either pending or approved, the disposition of that SIP would need to be resolved prior to reinstatement of the 1-psi waiver. We are also proposing that, to provide appropriate notice and lead time for corresponding changes to fuel supply, we would again revise our regulations through a notice-and-comment rulemaking process to fully implement the request. We seek comment on this approach.

XII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www.epa.gov/laws-regulations/laws-and-executive-orders*.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review. Any changes made at the suggestion or recommendation of OMB have been documented in the docket.

B. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control number 2060-0731. This action proposes the removal

[52] See CAA section 110(l).

of the 1-psi waiver in eight states. It does not alter practices used by the existing recordkeeping and reporting requirements, nor does it change the number or type of respondents and the manner in which they satisfy the fuel designation and PTD requirements.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, EPA concludes that the impact of concern for this rule is any significant adverse economic impact on small entities and that the agency is certifying that this rule will not have a significant economic impact on a substantial number of small entities because the proposed rule has no net burden on the small entities subject to the rule.

Small entities that will be subject to this action include small refiners (which are defined at 13 CFR 121.201) that produce or distribute gasoline in Illinois, Iowa, Minnesota, Missouri, Nebraska, Ohio, South Dakota, or Wisconsin. This action proposes to remove the 1-psi waiver for E10 in these states and EPA is not aware of any small refiners that produce or distribute gasoline or diesel fuel in these states. Thus, there would be no burden from this action on any small refiner. Furthermore, the removal of the 1-psi waiver in these states does not substantively alter the regulatory requirements on parties that make and distribute gasoline. We have therefore concluded that this action will have no net regulatory burden for all directly regulated small entities.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. This action implements mandates specifically and explicitly set forth in CAA section 211(h)(5) and we believe that this action represents the least costly, most cost-effective approach to achieve the statutory requirements.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. This action will be implemented at the state level and would affect gasoline refiners, blenders, marketers, distributors, and importers. Tribal governments would be affected only to the extent they produce, purchase, and use gasoline. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2-202 of the Executive Order. This action is not subject to Executive Order 13045 because it implements specific standards established by Congress in statutes.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This action proposes the removal of the 1-psi waiver for eight states. As discussed in Section VIII, it will require changes to the production and distribution of gasoline, which is expected to have some short- and long-term impacts on gasoline supply and cost in the affected areas, but we believe the market will be able to accommodate the change without any significant disruption.

I. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action does not involve technical standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations (people of color and/or Indigenous peoples) and low-income populations.

EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on communities with environmental justice concerns. This action proposes the removal of the 1-psi waiver in eight states, which could result in the reduction of several pollutants, including VOCs, NOx, and benzene as modeled through MOVES. Other pollutants may increase, such as PM.

List of Subjects in 40 CFR Part 1090

Environmental protection, Administrative practice and procedure, Air pollution control, Fuel additives, Gasoline, Petroleum, Renewable fuel.

Michael S. Regan,

Administrator.

For the reasons set forth in the preamble, EPA proposes to amend 40 CFR part 1090 as follows:

PART 1090—REGULATION OF FUELS, FUEL ADDITIVES, AND REGULATED BLENDSTOCKS

1. The authority citation for part 1090 continues to read as follows:

Authority: 42 U.S.C. 7414, 7521, 7522-7525, 7541, 7542, 7543, 7545, 7547, 7550, and 7601.

Subpart C—Gasoline Standards

2. Amend § 1090.215 by revising paragraph (b)(3) to read as follows:

§ 1090.215 Gasoline RVP Standards.

* * * * *

(b) * * *

(3)(i) RFG and SIP-controlled gasoline that does not allow for the ethanol 1.0 psi waiver does not qualify for the special regulatory treatment specified in paragraph (b)(1) of this section.

(ii) Gasoline subject to the 9.0 psi maximum RVP per-gallon standard in paragraph (a)(1) of this section in the following areas is excluded from the special regulatory treatment specified in paragraph (b)(1) of this section:

Table 1 to paragraph (b)(3)(ii)—Areas Excluded From the Ethanol 1.0 psi Waiver

State	Counties	Effective Date
Illinois	All	April 28, 2024
Iowa	All	April 28, 2024
Minnesota	All	April 28, 2024
Missouri	All	April 28, 2024
Nebraska	All	April 28, 2024
Ohio	All	April 28, 2024
South Dakota	All	April 28, 2024
Wisconsin	All	April 28, 2024

* * * * *

3. Add § 1090.297 to read as follows:

§ 1090.297 Procedures for reinstating the 1.0 psi RVP allowance for E10.

(a) EPA may approve a request from a state asking to reinstate the ethanol 1.0 psi waiver specified in § 1090.215(b)(1) for any area (or portion of an area) specified in § 1090.215(b)(3)(ii) if it meets the requirements of paragraph (b) of this section. If EPA approves such a request, an effective date will be set as specified in paragraph (c) of this section. EPA will notify the state in writing of EPA's action on the request and the effective date of the reinstatement upon approval of the request.

(b) The request must be signed by the governor of the state, or the governor's authorized representative, and must include all the following:

(1) A geographic description of each area (or portion of such area) that is covered by the request.

(2) A description of all the means in which emissions reduction from the removal of the ethanol 1.0 psi waiver are relied upon in any approved SIP or in any submitted SIP that has not yet been approved by EPA, if applicable.

(3) For any area covered by the request where emissions reductions from the removal of the ethanol 1.0 psi waiver are relied upon as specified in paragraph (b)(2) of this section, the request must include the following information:

(i) Identify whether the state is withdrawing any submitted SIP that has not yet been approved.

(ii)(A) Identify whether the state intends to submit a SIP revision to any approved SIP or any submitted SIP that has not yet been approved, which relies on emissions reductions from the removal of the ethanol 1.0 psi waiver, and describe any control measures that the state plans to submit to EPA for approval to replace the emissions reductions from the removal of the ethanol 1.0 psi waiver.

(B) A description of the state's plans and schedule for adopting and submitting any revision to any approved SIP or any submitted SIP that has not yet been approved.

(iii) If the state is not withdrawing any submitted SIP that has not yet been approved and does not intend to submit a revision to any approved SIP or any submitted SIP that has not yet been approved, describe why no revision is necessary.

(4) The governor of a state, or the governor's authorized representative, must submit additional information needed to administer the reinstatement of the ethanol 1.0 psi waiver upon request by EPA.

(c)(1) Except as specified in paragraph (c)(2) of this section, EPA will set an effective date of the reinstatement of the ethanol 1.0 psi waiver as requested by the governor, or the governor's authorized representative, but no less than 90 days from EPA's written notification to the state approving the reinstatement request.

(2) Where emissions reductions from the removal of the ethanol 1.0 psi waiver are included in an approved SIP or any submitted SIP that has not yet been approved, EPA will set an effective date of the reinstatement of the ethanol 1.0 psi waiver as requested by the governor, or the governor's authorized representative, but no less than 90 days from the effective date of EPA approval of the SIP revision that removes the emissions reductions from the ethanol 1.0 psi waiver, and, if necessary, provides emissions reductions to make up for those from the ethanol 1.0 psi waiver reinstatement.

(d) EPA will publish a notice in the *Federal Register* announcing the approval of any ethanol 1.0 psi waiver reinstatement request and its effective date.

(e) Upon the effective date for the reinstatement of the ethanol 1.0 psi waiver in a subject area (or portion of a subject area) included in an approved request, the ethanol 1.0 psi waiver will apply in such subject area.

4. Amend § 1090.1010 by redesignating paragraph (a)(2)(iii) as (a)(2)(iv) and adding a new paragraph (a)(2)(iii) to read as follows:

§ 1090.1010 Designation requirements for gasoline and regulated blendstocks.

(a) * * *

(2) * * *

(iii) If the CBOB is excluded from the special regulatory treatment for ethanol under § 1090.215(b)(3)(ii), Low-RVP Summer CBOB.

* * * * *

5. Amend § 1090.1110 by redesignating paragraph (b)(2)(i)(C) as (b)(2)(i)(D) and adding a new paragraph (b)(2)(i)(C) to read as follows:

§ 1090.1110 PTD requirements for gasoline, gasoline additives, and gasoline regulated blendstocks.

* * * * *

(b) * * *

(2) * * *

(i) * * *

(C) "Low-RVP CBOB. This product does not meet the requirements for summer reformulated gasoline."

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